

#### ABSTRACT OF THE DISCLOSURE

The present invention relates to a transgenic non-human animal expressing at least one transgene comprising a DNA sequence encoding a heterologous Amyloid Precursor Protein (APP) comprising at least the Arctic mutation (E693G) and a further AD (Alzheimer's disease) pathogenic mutation or a further transgene affecting AD pathogenesis, which results in increased amounts of intracellular soluble A aggregates, including A peptides. The present invention also relates to method of producing said transgenic animal, and to methods of screening for therapeutic or diagnostic agents useful in treatment or diagnosis of Alzheimer's disease.